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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR,	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/753,452	01/09/2004	Hiroshi Mori	MORI3004/EM	7911

23364 7590 10/23/2006

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EXAMINER

HOPKINS, ROBERT A

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 10/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/753,452

Applicant(s)

MORI ET AL.

Examiner

Robert A. Hopkins

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4, 5, 7 and 8 is/are allowed.
- 6) ☒ Claim(s) 1-3 and 6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>1-9-04, 12-6-05</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dyson(4593429) taken together with Stockford et al(3953184).

Dyson teaches an electric vacuum cleaner comprising a centrifugal separation member(15) having a substantially circular space and including an inlet port through which a suctioned dirt laden air stream is supplied. Dyson is silent as to wherein the centrifugal separation member further includes a swirl portion allowing the suctioned dirt laden air stream to swirl along an inner surface of the centrifugal separation member. Stockford et al teaches a cyclone separator having a substantially circular space including a swirl portion(figure 2) allowing the suctioned dirt laden air stream to swirl along an inner surface of the cyclone. It would have been obvious to someone of ordinary skill in the art at the time of the invention to provide a swirl portion allowing the suctioned dirt laden air stream to swirl along an inner surface of the centrifugal separation member of Dyson in order to speed up the primary air path to some extent so that the separation of the dust and particles will occur at an earlier point, and the turning point of the air stream can be moved up the separator considerably(column 3 lines 35-40 of Stockford et al).

Dyson further teaches wherein the centrifugal separation member further includes an opening in communication with a dirt receptacle(16) in which dirt particles separated by the centrifugal separation member are collected, the opening being installed outside the swirl portion in a bottom part of the centrifugal separation member. Stockford et al further teaches wherein the centrifugal separation member further includes a guide portion for isolating the inlet port and the opening at an upstream side of the suctioned dirt laden air stream swirling along the inner surface of the centrifugal separation member, wherein the guide portion extends from the swirl portion to abut against the inner surface of the centrifugal separation member.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dyson(4593429) taken together with Stockford et al(3953184).

Dyson teaches an electric vacuum cleaner comprising an electric blower for generating a suction air stream, a dirt separation member for separating and collecting therein dirt particles from the suction air stream, and a centrifugal separation member for centrifugally separating remaining dirt particles from a suctioned air stream that has passed through the dirt separation member, the centrifugal separation member being disposed in the first separation member(figure 2), and wherein in the centrifugal separation member has an inlet port into which the remaining dirt particles and the suctioned air stream are introduced. Dyson is silent as to an air stream guide portion provided near the inlet port to direct the suctioned air stream thereto. Stockford et al teaches a cyclone separator having a substantially circular space including an air stream guide portion provided near the inlet port to direct the suctioned air stream

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thereto. It would have been obvious to someone of ordinary skill in the art at the time of the invention to provide an air stream guide portion provided near the inlet port to direct the suctioned air stream thereto in order to speed up the primary air path to some extent so that the separation of the dust and particles will occur at an earlier point, and the turning point of the air stream can be moved up the separator considerably(column 3 lines 35-40 of Stockford et al).

Allowable Subject Matter

Claims 4,5,7,8 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Claim 4 recites "wherein the dirt separation member is provided at a bottom portion thereof with a communication aperture in communication with the electric blower". Dyson teaches an electric vacuum cleaner including a dirt separation member, but fails to teach wherein the dirt separation member is provided at a bottom portion thereof with a communication aperture in communication with the electric blower. The centrifugal separation member of Dyson is in communication with the blower. It would not have been obvious to someone of ordinary skill in the art at the time of the invention to provide a dirt separation member which is provided at a bottom portion thereof with a communication aperture in communication with the electric blower because Dyson does not suggest such a modification. Claim 5 depends on claim 4 and hence is also allowed.

Claim 7 teaches "an electric vacuum cleaner comprising an electric blower for generating a suction air stream, a dirt separation member for separating and trapping therein dirt particles from the suction air stream, and a centrifugal separation member for centrifugally separating remaining dirt particles from a suctioned air stream that has passed through the dirt separation member, the centrifugal separation member being detachably disposed in the dirt separation member, wherein the centrifugal separation member has an inlet port into which the remaining dirt particles and the suctioned air stream are introduced and a dirt removing portion substantially in contact with the inlet port when the centrifugal separation member is detached from the dirt separation member, the dirt removing portion being installed on an inner surface of the dirt separation member". Bair et al(6428589) teaches an electric vacuum cleaner including a centrifugal separation member being detachably disposed in the dirt separation member, but fails to teach a dirt removing portion substantially in contact with the inlet port when the centrifugal separation member is detached from the dirt separation member, the dirt removing portion being installed on an inner surface of the dirt separation member. It would not have been obvious to someone of ordinary skill in the art at the time of the invention to provide a dirt removing portion substantially in contact with the inlet port when the centrifugal separation member is detached from the dirt separation member, the dirt removing portion being installed on an inner surface of the dirt separation member because Bair et al does not suggest such a modification.

Claim 8 teaches "an electric vacuum cleaner comprising an electric blower for generating a suction air stream, a dirt separation member for separating and trapping

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therein dirt particles from the suction air stream, and a centrifugal separation member(50) for centrifugally separating remaining dirt particles from a suctioned air stream that has passed through the dirt separation member, the centrifugal separation member being detachably disposed in the dirt separation member; and a dirt receptacle for accumulating therein the remaining dirt particles centrifugally separated by the centrifugal separation member, the dirt receptacle being integrally formed on centrifugal separation member, wherein the dirt receptacle has an opening, the opening being blocked by the dirt separation member when the centrifugal separation member is placed in the dirt separation member". Bair et al(6428589) teaches an electric vacuum cleaner including a centrifugal separation member being detachably disposed in the dirt separation member, but fails to teach a dirt receptacle for accumulating therein the remaining dirt particles centrifugally separated by the centrifugal separation member, the dirt receptacle being integrally formed on centrifugal separation member, wherein the dirt receptacle has an opening, the opening being blocked by the dirt separation member when the centrifugal separation member is placed in the dirt separation member. It would not have been obvious to someone of ordinary skill in the art at the time of the invention to provide a dirt receptacle for accumulating therein the remaining dirt particles centrifugally separated by the centrifugal separation member, the dirt receptacle being integrally formed on centrifugal separation member, wherein the dirt receptacle has an opening, the opening being blocked by the dirt separation member when the centrifugal separation member is placed in the dirt separation member because Bair et al does not suggest such a modification.

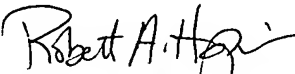
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert A. Hopkins whose telephone number is 571-272-1159. The examiner can normally be reached on Monday-Thursday, 7:30am-5pm, every Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Rah
October 17, 2006


ROBERT A. HOPKINS
PRIMARY EXAMINER
A.U. 1724